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ENVIRONMENTAL CONSULTANTS

June 15, 2016

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Northwest Region, Portland Office
Portland Harbor Section
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HAI Project No. 2708
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and
7200 NW Front Avenue, Portland, Oregon**

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of May 2016. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1.0 Communications and Document Submittals

In correspondence dated May 1, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the Draft Source Control Groundwater Modeling Schedule, as discussed with DEQ during an April 28, 2016 teleconference.

In correspondence dated May 4, 2016 (Dana Bayuk to Taku Fuji), DEQ provided information to NW Natural as related to guidance for the calculation of ecological hot spots.

In correspondence dated May 4, 2016 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, provided DEQ with notice of upcoming fieldwork on the Siltronic property as related to the resampling of six groundwater monitoring wells for testing of samples for PAHs.

In correspondence dated May 10, 2016, and follow-up correspondence dated May 11, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted an updated version of Table 2 as part of the groundwater model calibration. The updated Table 2 provides revised recharge rates proposed for the water budget as related to the Fill water-bearing zone.

A project manager call was conducted with DEQ on May 24, 2016 and a program manager call was conducted with DEQ on May 26, 2016 to discuss project status and schedules for work at the Gasco Site.

In correspondence dated May 13, 2016 (Dana Bayuk to Ben Hung and Madi Novak), DEQ provided comments/questions to NW Natural and Siltronic as related to the content of the *Data Source Summary Tables* in support of the data transfer being coordinated by both entities.

In correspondence dated May 13, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *Gasco Upland FS Data Gaps Investigation Work Plan*, dated May 2016 for DEQ's review and comment/approval.

In correspondence dated May 13, 2016, (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, transmitted the *Outline for the Remedial Investigation/Risk Assessment Addendum for OU1, NW Natural Gasco Site*, dated May 13, 2016 for DEQ's review and comment/approval.

In correspondence dated May 13, 2016 (John Renda to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided notification of the tentative schedule for advancement of TarGOST borings to be completed for evaluation of conditions "one year after the start of long-term, full-time operation of the HC&C system".

In correspondence dated May 14, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided monthly HC&C system figure sets as part of the routine HC&C system reporting.

In correspondence dated May 18, 2016 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, provided responses to DEQ's May 13, 2016 questions related to NW Natural's Data Availability Summary Table (Siltronic Property) prepared as part of the NW Natural-Siltronic data exchange process.

In correspondence dated May 23, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of Siltronic, provided for DEQ review the *First Quarter 2016 NW Natural Source Control Groundwater Treatment Facility Residual Lab Data Package*.

In correspondence dated May 26, 2016 (Jen Mott to Dana Bayuk), Anchor QEA, on behalf of NW Natural, provided an updated Gasco RI/FS Planning Schedule to reflect an update to the submittal date for the Draft FS Work Plan.

In correspondence dated May 26, 2016 (Dana Bayuk to Bob Wyatt), DEQ provided comments on first quarter 2016 groundwater treatment residuals package, as related to detections of 1,2-dichlorobenzene in the system.

In correspondence dated May 27, 2016 (Dana Bayuk to Pradeep Mugunthan), DEQ provided approval of the May 11, 2016 updated Table 2 providing revised recharge rates proposed for the Fill water-bearing zone water budget. With this approval, NW Natural can now move forward with model calibration including both the Fill and Alluvium WBZs.

In correspondence dated May 31, 2016 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, provided notice to DEQ of pending field activities associated with the second quarter 2016 groundwater monitoring program.

2.0 Field Work

Surveying of the Northwest Drainage Pond portion of Doane Creek (features and sample locations) was completed on May 3, 2016.

Resampling of select monitoring wells as part of the first quarter 2016 routine monitoring program was completed on the Siltronic property on May 10, 2016. The event was conducted to collect samples for polynuclear aromatic hydrocarbon analysis, to replace samples collected in March, which the laboratory inadvertently did not analyze.

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during May 2016. The system recovered approximately 34 gallons of fluids in April, primarily DNAPL.

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted in May 2016, with the system operating under Phase 2 testing parameters since July 21, 2015.

Baseline DNAPL removal as needed to maintain at levels below the top of the well sumps was conducted by Anchor QEA during May 2016 in the following wells near the river shoreline.

- MW-14U
- MW-26U
- MW-27U
- MW-38U
- MW-PW2L
- PW-2L

On March 31, 2014 NW Natural discontinued routine discharges of treated groundwater to the sanitary sewer (Industrial Wastewater Discharge Permit 500.022). During May 2016 all water was directed to NW Natural's on-site wastewater treatment plant and discharged to the Willamette River consistent with National Pollutant Discharge Elimination System (NPDES) Permit No. 103061 (expires August 31, 2018). Results from NW Natural's NPDES effluent sampling are provided to DEQ in Discharge Monitoring Reports that are submitted on a monthly basis in accordance with the permit. A total of 11,719,697 gallons of treated water were discharged under the NPDES permit during May.

3.0 Anticipated Activities and June and July 2016

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during June and July 2016 to discuss ongoing project tasks.

The draft Feasibility Study Work Plan for the Gasco Uplands will be under development during the indicated timeframe.

Laboratory data packages related to the Doane Creek supplemental investigation activities are undergoing validation during June 2016.

Planning and preparations for completion of the RI/RA Addendum for the northern portion of the Siltronic property will be underway during the indicated timeframe. NW Natural hopes to work with the Oregon Department of Justice to complete related revisions to the Voluntary Agreement before the end of June 2016.

Calibration of the HC&C groundwater model will occur during June and July 2016.

Advancement of TarGOST borings is scheduled for the week of June 20, 2016. This event will satisfy DEQ's direction to conduct an event 1 year after startup of full-time, full-scale operation of the HC&C System. Borings will be advanced at the same locations as the November 2015 (6 month) event.

A groundwater modeling workshop is scheduled for June 29, 2016. Anchor QEA will present the current status of the model calibration to DEQ and EPA.

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, NW Natural has not received DEQ comments on these documents.

- *Fill WBZ Trench Design Evaluation Report, Gasco/Siltronic*, prepared by Anchor QEA, dated April 8, 2015.
- *Hydraulic Control and Containment (HC&C) System Operation and Maintenance (O&M) Manual*, prepared by Anchor QEA, dated May 1, 2015.
- *HC&C Capture Performance and Monitoring Plan (PMP)*, prepared by Anchor QEA, dated May 1, 2015.
- *Evaluation of Location of Former Industrial Use Water Supply Well Mult 802, NW Natural Gasco Property, Portland, Oregon*, prepared by HAI, dated November 11, 2015.
- Tabulation of the *Current Groundwater Monitoring Program* as approved for NW Natural implementation at the Gasco and Siltronic properties, transmitted January 15, 2016, revised March 18, 2016, and further revised by Siltronic Corporation April 15, 2016. This document needs DEQ feedback to confirm it achieves DEQ's objective of a holistic / comprehensive document.
- *Contaminated Materials Management Plan for the NW Natural Gasco Site*, prepared by Anchor QEA, dated February 23, 2016.
- *NW Natural Groundwater Treatment System Operations and Maintenance Manual*, prepared by *Sevenson Environmental Services, Inc.*, dated March 2016
- *NW Natural and Siltronic Data Summary Tables – RI Data on the Siltronic property*, transmitted to DEQ on April 20, 2016. These tables need DEQ feedback to confirm that the datasets summarized in the tables are inclusive of datasets DEQ expects to be used for the Gasco Site RI/RA Addendum for the northern portion of the Siltronic property (DEQ feedback provided May 13, 2016).
- *Outline for the Remedial Investigation/Risk Assessment Addendum for OU1, NW Natural Gasco Site*, prepared by HAI and Anchor, QEA, dated May 13, 2016.
- *Gasco Upland FS Data Gaps Investigation Work Plan*, prepared by Anchor QEA dated May 2016
- Responses to DEQ questions regarding Summary of Data Availability Tables, as provided by HAI on May 18, 2016 and Maul, Foster, & Alongi (MFA) on June 3, 2016.

Should you have any questions, please contact the undersigned.

Sincerely,



Rob Ede, R.G.
Principal

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